

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Previously Presented) A method of managing SMS messages in a first mobile operator network, said network comprising a plurality of subscribers and a Short Message Service Centre (SMSC), the method comprising the steps of:

starting a delivery attempt of the SMS message from a first subscriber to a second subscriber via said SMSC;

intercepting transparently to the SMSC said SMS message delivery attempt from the first subscriber in the network before delivery of said SMS message, by intercepting an inbound HLR query associated with said message delivery attempt, by examining said intercepted HLR query for possible invocation of a smart service to said SMS message, including the steps of:

routing the HLR query onward to a HLR

generating a response to the HLR query in the HLR, the HLR query response including a mobile network location address of said second subscriber;

replacing, in a smart services control node, the mobile network location address of said second subscriber in an HLR query response with the network location address of the smart services control node;

routing said intercepted SMS message delivery attempt via a smart services control node in the network;

and

invoking said smart services for said SMS message destined to said subscriber in response to said examination.

2. (Previously Presented) A method of managing SMS messages, as claimed in claim 1, between a subscriber of the first mobile operator network and another subscriber of a second mobile operator network in a telecommunications system, the method further comprising the steps of:

delivering a SMS message from said first subscriber in said first mobile operator network to said subscriber of said second mobile operator network;

intercepting a SMS message inbound delivery attempt in said second mobile operator network before delivery of said SMS message;

replacing a mobile network location address of said second subscriber in an HLR query response with the network location address of a smart services control node;

routing said intercepted SMS message delivery attempt via a smart services control node in second operator mobile network;

examining said message delivery attempt for possible invocation of a smart service to said SMS message; and

invoking said smart services for said SMS message destined to said subscriber of said second mobile operator network in response to said examination.

3. (Previously Presented) A method of managing SMS messages as claimed in claim 1 wherein the step of intercepting includes intercepting an inbound HLR query associated with said message delivery attempt.

4. (Previously Presented) A method of managing SMS messages as claimed in claim 3 wherein the step of intercepting includes intercepting an inbound HLR query associated with said message delivery attempt and examining said intercepted HLR query such that said HLR query provides an indication that a smart service needs to be applied to said SMS message and route the SMS message to the smart services control node.

5. (Previously Presented) A method of managing SMS messages as claimed in claim 4 wherein said indication from the HLR Query is associated with one or more of the following: a SMS service, a specific subscriber directory number (MSISDN), a directory number in the HLR Query matches a specific number prefix, a specific SMSC identified by its PLMN network address, a foreign SMSC network address.

6. (Previously Presented) A method of managing SMS messages as claimed in claim 4, further comprising the step of replacing a mobile network location address of said second subscriber with the network location address of the smart services

control node such that the first mobile network operator routes said SMS message via said smart services control node.

7. (Previously Presented) A method of managing SMS messages as claimed in claim 1 wherein the step of intercepting said message delivery attempt is based on a condition that said query originated from said SMSC or another mobile network.

8. (Previously Presented) A method of managing SMS messages as claimed in claim 4, further comprising the step of routing said SMS message from said smart services control node to said real location address wherein said SMS message is routed to said real network location address from an address stored in said smart services control node previously obtained from said HLR query response.

9. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of terminating said SMS message delivery attempt in the said smart services control node when the said smart service requires that the said SMS message is not delivered to the said subscriber of the said second operator network.

10. (Previously Presented) A method of managing SMS messages as claimed in claim 1 further comprising the step of terminating said SMS message delivery attempt when said condition of said intercepted delivery attempt indicates in said second operator network that said SMS message originates from a barred originating entity belonging to another network.

11. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of triggering the execution of smart service logic associated with said smart services SMS control node in response to condition based on the content of said SMS message.

12. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of triggering the execution of smart service logic associated with said smart services SMS control node in response to condition based on

the content of said SMS message and wherein said trigger condition is a meta tag signal or attribute associated with said SMS message.

13. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of generating a unique identifier for said SMS message at said smart services SMS control node.

14. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of generating a unique identifier for said SMS message at said smart services SMS control node, wherein said unique identifier is generated from one or more of the following SMS message parameters: Originating Address, Destination Address, message fragment number, SMSC address or SMS Centre timestamp.

15. (Previously Presented) A method of managing SMS messages as claimed in claim 1, further comprising the step of generating a unique identifier for said SMS message at said smart services SMS control node; storing said unique identifier in a storage memory of said smart services control node.

16. (Previously Presented) A method of managing SMS messages as claimed in claim 13, further comprising the step of comparing the generated unique identifier with unique identifiers for each SMS message delivery attempt processed by said smart services SMS node for detecting a subsequent attempt of an SMS message from a remote SMSC after the first delivery attempt.

17. (Previously Presented) A method of managing SMS messages as claimed in claim 13, further comprising the step of comparing the generated unique identifier with unique identifiers for each SMS message delivery attempt processed by said smart services SMS node for detecting a subsequent attempt of an SMS message from a remote SMSC after the first delivery attempt, wherein only unique identifiers are stored in said storage memory for retry SMS delivery attempts for comparison and wherein said retry SMS delivery attempt is routed onwards by the smart services control node to the real network location address of the said subscriber after said comparison.

18. (Previously Presented) A method of managing SMS messages as claimed in claim 13, further comprising the step of comparing the generated unique identifier with unique identifiers for each SMS message delivery attempt processed by said smart services SMS node for detecting a subsequent attempt of an SMS message from a remote SMSC after the first delivery attempt, wherein only unique identifiers are stored in said storage memory for retry SMS delivery attempts for comparison and wherein said retry SMS delivery attempt is routed onwards by the smart services control node to the real network location address of the said subscriber after said comparison and said onward routing is conditionally based on a service indicator associated with the smart services control node.

19. (Previously Presented) A method of managing SMS messages as claimed in claim 13, further comprising the steps of generating a database of unique identifiers in said storage memory and deleting said stored unique identifiers after a preset period of time.

20. (Previously Presented) A method of managing SMS messages, between a subscriber of the first mobile operator network and another subscriber of a second mobile operator network in a telecommunications system, the method comprising the steps of:

delivering a SMS message from said first subscriber in said first mobile operator network to said subscriber of said second mobile operator network;

intercepting a SMS message inbound delivery attempt in said second mobile operator network before delivery of said SMS message;

replacing, in a smart services control node, a mobile network location address of said second subscriber in an HLR query response with the network location address of the smart services control node;

routing said intercepted SMS message delivery attempt via a smart services control node in second operator mobile network;

examining said message delivery attempt for possible invocation of a smart service to said SMS message; and

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invoking said smart services for said SMS message destined to said subscriber of said second mobile operator network in response to said examination.

21. (Previously Presented) A computer program on a computer readable storage medium comprising program instructions for causing a computer to perform the method of claim 1.

22 – 24. (Cancelled)

25. (Previously Presented) A system of managing SMS messages in a first mobile operator network, said network comprising a plurality of subscribers and a Short Message Service Centre (SMSC), the system comprising:

means for starting a delivery attempt of the SMS message from a first subscriber to a second subscriber via said SMSC;

means for intercepting transparently said SMS message delivery attempt from the first subscriber in the network before delivery of said SMS message, by intercepting an inbound HLR query associated with said message delivery attempt by examining said intercepted HLR query for possible invocation of a smart service to said SMS message, including the steps of;

means for routing said intercepted SMS message delivery attempt via a smart services control node in the network;

means for routing the HLR query onward to an HLR;

means in the HLR for generating a response to the HLR query, the HLR query response including a mobile network location address of said second subscriber;

means in a smart services control node for replacing the mobile network location address of said second subscriber in an HLR query response with the network location address of the smart services control node;

means for examining said message delivery attempt for possible invocation of a smart service to said SMS message; and

means for invoking said smart services for said SMS message destined to said subscriber in response to said examination.

26. (Previously Presented) A system of managing SMS messages, as claimed in claim 25, between a subscriber of the first mobile operator network and another subscriber of a second mobile operator network in a telecommunications system, the system further comprising:

means for delivering an SMS message from said subscriber in said first mobile operator network to said subscriber of said second mobile operator network;

means for intercepting the SMS message inbound delivery attempt in said second mobile operator network before delivery of said SMS message;

means for routing said intercepted SMS message delivery attempt via a smart services control node in second operator mobile network;

means for examining said message delivery attempt for possible invocation of a smart service to said SMS message; and

means for invoking said smart services for said SMS message destined to said subscriber of said second mobile operator network from said examination.

27. (Previously Presented) A computer program on a computer readable storage medium comprising program instructions for causing a computer to perform the method of claim 20.